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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,639	08/29/2001	Yasuyuki Kojima	500.40584X00	5913

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EXAMINER	
ARBES, CARL J	

ART UNIT	PAPER NUMBER
3729	

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/940,639	KOJIMA ET AL.	
	Examiner	Art Unit	
	C. J. Arbes	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *8-13 and 15* is/are withdrawn from consideration.

5)☒ Claim(s) *14* is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7 and 14, drawn to a method of making a printed circuit board, classified in class 29, subclass 847..

II. Claims 8-13, drawn to printed circuit board, classified in class 174, subclass 255.

III. Claim 15, drawn to an apparatus for making a printed circuit board, classified in class 65, subclass 485.

The inventions are distinct, each from the other because:

Inventions iii and ii are related as apparatus and product made. The inventions are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used to make a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP 806.05(g)). In this case the product as claimed can be made by another and materially different apparatus to wit: a mechanical cutting device such as a knife.

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as by cutting with a knife.

Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus such as an apparatus which does not calculate trimming amount.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the searches for the inventions are divergent, restriction for examination purposes as indicated is proper.

During a telephone conversation with Alan Schiavelli, Esquir on or about 25 March 2002 a provisional election was made with traverse to prosecute the invention of Groiup I, claims 1-7 and 14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-13 and 15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

An Office Action on the merits of Claims 1-7 and 14 follows.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 ad 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Japan Patent Number 11340635 A; hereinafter '635.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over '635.

The '635 teaches a multilayered printed wiring board for electronic circuits which has resistors printed on a glass inner layer board. The resistance is adjusted by a laser trimming step. If in fact the electrodes which are inherently present to connect the electric circuit are not taught to be avoided when the lasering step is used then it would have been obvious to avoid the electrodes since it is the intent of the '635 to adjust the resistors (or electrical property) and not the electrodes. As applied to claim 4 it is also inherent that a laser beam will form a crystal grain and/or crystal rod in the glass

substrate inasmuch as the large intensity of the high powered laser beam will create at a minimum short distance atomic (in order to minimize the Gibb's Free Energy) or the atomic structure. As applied to claim 5 it would also be obvious in view of the '635 to instead of changing the resistance of the glass substrate to instead a capacitance thereon. This limitation is additionally held to have been within the skill of an artisan, if in fact the '635 fails to expressly teach this limitation. The limitations recited in Claims 6 and 7 are also held to have been within the ordinary skill of an artisan and hence little or no patentable weight is given thereto. Whether the wiring is partially or fully cut or whether or not the electrode is partially removed or cut is not patentable subject matter in view of the evidence provided by the '635.

Claim 14 is held to be allowable.

Furthermore the Patent Office Saith not.

Any inquiry concerning this communication should be directed to C. J. Arbes at telephone number (703)308-1857.

CARL J. ARBES
PRIMARY EXAMINER